

Student Thesis



Bachelor / Master Thesis

Where am I? – Map-matching on Public Data for Automated Driving

© OpenStreetMap contributors

Department

Vehicle Intelligence & Automated Driving

Contact



Johannes Hiller

+49 241 80 25672

johannes.hiller@ika.rwth-aachen.de

Language

German or English

Entry Date

Earliest possible date

Prior knowledge

Python

Topic and Goal of the Thesis

The development of automated driving has progressed towards a point where the public testing is conceivable. To some extent it is already underway. However, several problems must still be solved, especially in the area of safety assurance and impact assessment. For the analysis of recorded data, it is important to match the data with map data. In this thesis, concept is to be implemented which allows to apply map-matching algorithms to publicly available OpenStreetMap data.

Working Points

- Literature research on map-matching and digital maps
- Development of a concept for the representation of OpenStreetMap data for map-matching
- Implementation of the concept using recorded data
- Validation and comparison of the results
- Documentation of the results

Requirements

- Good English or German language skills
- Reliability, commitment and enjoyment of working independently
- Experience with Python desirable
- Experience with OpenStreetMap advantageous